SEQUENCE LISTING

<110> Wang, Caili
        Zhong, Pingyu
        Wang, Xinwei

<120> ADAPTER-DIRECTED DISPLAY SYSTEMS

<130> 13403.0005NPUS00

<160> 24

<170> PatentIn version 3.1

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<211> 57
<212> DNA
<213> Bacteriophage M13

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<211> 19
<212> PRT
<213> Bacteriophage M13

<400> 2

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His Ser Ala

<210> 3
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<212> DNA
<213> Bacteriophage M13

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<213>   Artificial Sequence

<220>
<223>   Synthetic, comprising phage gene III leader sequence, GABAB
  recep
        tor 2 domain and Myc domain

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    120

cagctgcagg acgtcggagg ttgcgcggcc gcagaacaaa aactcatctc agaagaggat
    180

ctgagatctg gaggcggtac tgttgaaagt tgtttagcaa aa .
    222


<210>   5
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<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic, comprising phage gene III leader sequence, GABAB
  recep
        tor 2 domain and Myc domain

<400>   5
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Leu Val Val Pro Phe Tyr Ser His Ser Ala Thr Ser Arg Leu Glu Gly
1   5   10   15

Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp
            20   25   30

Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys
        35   40   45

Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Arg Ser Gly
    50   55   60

Gly Gly Thr Val Glu Ser Cys Leu Ala Lys
65   70

<210>   6
<211>   56
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Synthetic, comprising phage gene III leader sequence, GABAB recep
    tor 2 domain and Myc domain

<400>   6

Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu Asn His Arg Leu Arg Met
1   5   10   15

Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu Glu Val Thr Met Gln Leu
            20   25   30

Gln Asp Val Gly Gly Cys Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu
            35   40   45

Glu Asp Leu Arg Ser Gly Gly Gly
    50   55

<210>   7
<211>   3093
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Synthetic, comprising ampicillin gene sequence, ColE1 repli
cation
        origin, f1 replication origin, Plac promoter, GABAB recept
or 1 d
        omain, histidine tag

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gcttccggct cgtatgttgt gtggaattgt gagcggataa caatttaccg gttctttaag
120

gaggaattaa aaaatgaaat acctattgcc tacggcagcc gctggattgt tattactcgc
180

ggcccagccg gccatggcgg ccctgcaggc ctctagagcg gccgctggag gtgaggagaa
240

gtcccggctg ttggagaagg agaaccgtga actggaaaag atcattgctg agaaagagga
300

gcgtgtctct gaactgcgcc atcaactcca gtctgtagga ggttgtagat cttatccata
360

cgacgtacca gactacgcag gaggtcatca ccatcatcac cattaatgag tcgacctcga
420

ccaattcgcc ctatagtgag tcgtattaca attcactggc cgtcgtttta caacgtcgtg
480

actgggaaaa ccctggcgtt acccaactta atcgccttgc agcacatccc cctttcgcca
540

gctggcgtaa tagcgaagag ccccgcaccg atcgcccttc ccaacagttg cgcagcctga
600

atggcgaatg gacgcgccc tgtagcggcg cattaagcgc ggcgggtgtg gtggttacgc
660

gcagcgtgac cgctacactt gccagcgccc tagcgcccgc tcctttcgct ttcttccctt
720

cctttctcgc cacgttcgcc ggctttcccc gtcaagctct aaatcggggg ctccctttag
780

ggttccgatt tagtgcttta cggcacctcg accccaaaaa acttgattag ggtgatggtt
840

cacgtagtgg gccatcgccc tgatagacgg tttttcgccc tttgacgttg gagtccacgt
900

tctttaatag tggactcttg ttccaaactg gaacaacact caaccctatc tcggtctatt

960

cttttgattt ataagggatt ttgccgattt cggcctattg gttaaaaaat gagctgattt
1020

aacaaaaatt taacgcgaat tttaacaaaa tattaacgct tacaatttag gtggcacttt
1080

tcggggaaat gtgcgcggaa cccctatttg tttatttttc taaatacatt caaatatgta
1140

tccgctcatg agacaataac cctgataaat gcttcaataa tattgaaaaa ggaagagtat
1200

gagtattcaa catttccgtg tcgcccttat tccctttttt gcggcatttt gccttcctgt
1260

ttttgctcac ccagaaacgc tggtgaaagt aaaagatgct gaagatcagt tgggtgcacg
1320

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1380

agaacgtttt ccaatgatga gcacttttaa agttctgcta tgtggcgcgg tattatcccg
1440

tattgacgcc gggcaagagc aactcggtcg ccgcatacac tattctcaga atgacttggt
1500

tgagtactca ccagtcacag aaaagcatct tacggatggc atgacagtaa gagaattatg
1560

cagtgctgcc ataaccatga gtgataacac tgcggccaac ttacttctga caacgatcgg
1620

aggaccgaag gagctaaccg cttttttgca caacatgggg gatcatgtaa ctcgccttga
1680

tcgttgggaa ccggagctga atgaagccat accaaacgac gagcgtgaca ccacgatgcc
1740

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1800

ccggcaacaa ttaatagact ggatggaggc ggataaagtt gcaggaccac ttctgcgctc
1860

ggcccttccg gctggctggt ttattgctga taaatctgga gccggtgagc gtgggtctcg

1920

cggtatcatt gcagcactgg ggccagatgg taagccctcc cgtatcgtag ttatctacac
1980

gacggggagt caggcaacta tggatgaacg aaatagacag atcgctgaga taggtgcctc
2040

actgattaag cattggtaac tgtcagacca agtttactca tatatacttt agattgattt
2100

aaaacttcat ttttaattta aaaggatcta ggtgaagatc cttttttgata atctcatgac
2160

caaaatccct taacgtgagt tttcgttcca ctgagcgtca gacccccgtag aaaagatcaa
2220

aggatcttct tgagatcctt tttttctgcg cgtaatctgc tgcttgcaaa caaaaaaacc
2280

accgctacca gcggtggttt gtttgccgga tcaagagcta ccaactcttt ttccgaaggt
2340

aactggcttc agcagagcgc agataccaaa tactgtcctt ctagtgtagc cgtagttagg
2400

ccaccacttc aagaactctg tagcaccgcc tacatacctc gctctgctaa tcctgttacc
2460

agtggctgct gccagtggcg ataagtcgtg tcttaccggg ttggactcaa gacgatagtt
2520

accggataag cgcagcggt cgggctgaac ggggggttcg tgcacacagc ccagcttgga
2580

gcgaacgacc tacaccgaac tgagatacct acagcgtgag ctatgagaaa gcgccacgct
2640

tcccgaaggg agaaaggcgg acaggtatcc ggtaagcggc agggtcggaa caggagagcg
2700

cacgagggag cttccagggg gaaacgcctg gtatctttat agtcctgtcg ggtttcgcca
2760

cctctgactt gagcgtcgat ttttgtgatg ctcgtcaggg gggcggagcc tatggaaaaa
2820

cgccagcaac gcggcctttt tacggttcct ggccttttgc tggccttttg ctcacatgtt

Page 6

2880

cttttcctgcg ttatcccctg attctgtgga taaccgtatt accgcctttg agtgagctga
2940

taccgctcgc cgcagccgaa cgaccgagcg cagcgagtca gtgagcgagg aagcggaaga
3000

gcgcccaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca
3060

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3093

<210> 8
<211> 192
<212> DNA
<213> Bacteriophage M13

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aaactcatct cagaagagga tctgagatct agatctggag gcggtactgt tgaaagttgt
120

ttagcaaaac ctcatacaga aaattcattt actaacgtct ggaaagacga caaaacttta
180

gatcgttacg ct
192

<210> 9
<211> 64
<212> PRT
<213> Bacteriophage M13

<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> Xaa = stop codon

<400> 9

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            20              25                  30


   Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Pro His Thr Glu Asn
            35              40                  45


   Ser Phe Thr Asn Val Trp Lys Asp Asp Lys Thr Leu Asp Arg Tyr Ala
            50              55                  60


   <210>  10
   <211>  2962
   <212>  DNA
   <213>  Artificial Sequence

   <220>
   <223>  Synthetic, comprising ampicillin gene sequence, ColE1 repli
   cation
             origin, f1 replication origin, Plac promoter, influenza vi
   rus he
          magglutinin tag

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   gcttccggct cgtatgttgt gtggaattgt gagcggataa caatttaccg gttctttttaa
       120

   ctttagtaag gaggaattaa aaaatgaaat acctattgcc tacggcagcc gctggattgt
       180

   tattactcgc ggcccagccg gccatggcgg ccctgcaggc ctctagagcg ccgcttacc
       240

   cgtacgacgt tccggactac gcaggtggct gctgataagt cgacctcgac caattcgccc
       300

   tatagtgagt cgtattacaa ttcactggcc gtcgttttac aacgtcgtga ctgggaaaac
       360

   cctggcgtta cccaacttaa tcgccttgca gcacatcccc ctttcgccag ctggcgtaat
       420
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agcgaagagg cccgcaccga tcgcccttcc caacagttgc gcagcctgaa tggcgaatgg
480

gacgcgccct gtagcggcgc attaagcgcg gcgggtgtgg tggttacgcg cagcgtgacc
540

gctacacttg ccagcgccct agcgcccgct cctttcgctt tcttcccttc ctttctcgcc
600

acgttcgccg gctttccccg tcaagctcta aatcgggggc tccctttagg gttccgattt
660

agtgctttac ggcacctcga ccccaaaaaa cttgattagg gtgatggttc acgtagtggg
720

ccatcgccct gatagacggt ttttcgccct ttgacgttgg agtccacgtt ctttaatagt
780

ggactcttgt tccaaactgg aacaacactc aaccctatct cggtctattc ttttgattta
840

taagggattt tgccgatttc ggcctattgg ttaaaaaatg agctgattta acaaaaattt
900

aacgcgaatt ttaacaaaat attaacgctt acaatttagg tggcactttt cggggaaatg
960

tgcgcggaac ccctatttgt ttatttttct aaatacattc aaatatgtat ccgctcatga
1020

gacaataacc ctgataaatg cttcaataat attgaaaaag gaagagtatg agtattcaac
1080

atttccgtgt cgcccttatt cccttttttg cggcattttg ccttcctgtt tttgctcacc
1140

cagaaacgct ggtgaaagta aaagatgctg aagatcagtt gggtgcacga gtgggttaca
1200

tcgaactgga tctcaacagc ggtaagatcc ttgagagttt cgccccgaa gaacgttttc
1260

caatgatgag cacttttaaa gttctgctat gtggcgcggt attatcccgt attgacgccg
1320

ggcaagagca actcggtcgc cgcatacact attctcagaa tgacttggtt gagtactcac
1380
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cagtcacaga aaagcatctt acggatggca tgacagtaag agaattatgc agtgctgcca
1440

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1500

agctaaccgc ttttttgcac aacatggggg atcatgtaac tcgccttgat cgttgggaac
1560

cggagctgaa tgaagccata ccaaacgacg agcgtgacac cacgatgcct gtagcaatgg
1620

caacaacgtt gcgcaaacta ttaactggcg aactacttac tctagcttcc cggcaacaat
1680

taatagactg gatggaggcg gataaagttg caggaccact tctgcgctcg gcccttccgg
1740

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1800

cagcactggg gccagatggt aagccctccc gtatcgtagt tatctacacg acggggagtc
1860

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1920

attggtaact gtcagaccaa gtttactcat atatacttta gattgattta aaacttcatt
1980

tttaatttaa aaggatctag gtgaagatcc tttttgataa tctcatgacc aaaatccctt
2040

aacgtgagtt ttcgttccac tgagcgtcag accccgtaga aaagatcaaa ggatcttctt
2100

gagatccttt ttttctgcgc gtaatctgct gcttgcaaac aaaaaaacca ccgctaccag
2160

cggtggtttg tttgccggat caagagctac caactctttt tccgaaggta actggcttca
2220

gcagagcgca gataccaaat actgtccttc tagtgtagcc gtagttaggc caccacttca
2280

agaactctgt agcaccgcct acatacctcg ctctgctaat cctgttacca gtggctgctg
2340
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ccagtggcga taagtcgtgt cttaccgggt tggactcaag acgatagtta ccggataagg
    2400

cgcagcggtc gggctgaacg ggggggttcgt gcacacagcc cagcttggag cgaacgacct
    2460

acaccgaact gagataccta cagcgtgagc tatgagaaag cgccacgctt cccgaaggga
    2520

gaaaggcgga caggtatccg gtaagcggca gggtcggaac aggagagcgc acgagggagc
    2580

ttccaggggg aaacgcctgg tatctttata gtcctgtcgg gtttcgccac ctctgacttg
    2640

agcgtcgatt tttgtgatgc tcgtcagggg ggcggagcct atggaaaaac gccagcaacg
    2700

cggcctttt acggttcctg gccttttgct ggccttttgc tcacatgttc tttcctgcgt
    2760

tatcccctga ttctgtggat aaccgtatta ccgcctttga gtgagctgat accgctcgcc
    2820

gcagccgaac gaccgagcgc agcgagtcag tgagcgagga agcggaagag cgcccaatac
    2880

gcaaaccgcc tctccccgcg cgttggccga ttcattaatg cagctggcac gacaggtttc
    2940

ccgactggaa agcgggcagt ga
    2962

<210> 11
<211> 903
<212> DNA
<213> Bacteriophage M13

<400> 11
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    60

aaccatcgcc tgcgaatgaa gatcacagag ctggataaag acttggaaga ggtcaccatg
    120

cagctgcagg acgtcggagg ttgcgcggcc gcagaacaaa aactgatctc agaagaggat

180

ctgacgcgtg ctggcggcgg ctctggtggt ggttctggtg gcggctctga gggtggcggc
240

tctgagggtg gcggttctga gggtggcggc tctgagggtg gcggttccgg tggcggctcc
300

ggttccggtg attttgatta tgaaaaaatg gcaaacgcta ataaggggc tatgaccgaa
360

aatgccgatg aaaacgcgct acagtctgac gctaaaggca aacttgattc tgtcgctact
420

gattacggtg ctgctatcga tggtttcatt ggtgacgttt ccggccttgc taatggtaat
480

ggtgctactg gtgattttgc tggctctaat tcccaaatgg ctcaagtcgg tgacggtgat
540

aattcacctt taatgaataa tttccgtcaa tatttacctt ccctccctca atcggttgaa
600

tgtcgccctt ttgtctttgg cgctggtaaa ccatatgaat tttctattga ttgtgacaaa
660

ataaacttat ccgtggtgt ctttgcgttt cttttatatg ttgccacctt tatgtatgta
720

ttttctacgt ttgctaacat actgcgtaat aaggagtctt aataaggcgc gccacaattt
780

cacagtaagg aggtttaata aatgaaaaag acagctattg cgattgcagt ggcactggct
840

ggtttcgcta ccgtagcgca ggctagatct ggaggcggta ctgttgaaag ttgtttagca
900

aaa
903

<210> 12
<211> 287
<212> PRT
<213> Bacteriophage M13

<400> 12

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Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp
            20              25              30

Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys
            35              40              45

Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Thr Arg Ala
        50              55              60

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Glu Gly Gly Gly
    65              70              75              80

Ser Glu Gly Gly Gly Ser Glu Gly Gly Gly Ser Glu Gly Gly Gly Ser
            85              90              95

Gly Gly Gly Ser Gly Ser Gly Asp Phe Asp Tyr Glu Lys Met Ala Asn
            100             105             110

Ala Asn Lys Gly Ala Met Thr Glu Asn Ala Asp Glu Asn Ala Leu Gln
        115             120             125

Ser Asp Ala Lys Gly Lys Leu Asp Ser Val Ala Thr Asp Tyr Gly Ala
    130             135             140

Ala Ile Asp Gly Phe Ile Gly Asp Val Ser Gly Leu Ala Asn Gly Asn
145             150             155             160

Gly Ala Thr Gly Asp Phe Ala Gly Ser Asn Ser Gln Met Ala Gln Val
            165             170             175

Gly Asp Gly Asp Asn Ser Pro Leu Met Asn Asn Phe Arg Gln Tyr Leu
        180             185             190
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Pro Ser Leu Pro Gln Ser Val Glu Cys Arg Pro Phe Val Phe Gly Ala
        195             200             205

Gly Lys Pro Tyr Glu Phe Ser Ile Asp Cys Asp Lys Ile Asn Leu Phe
210             215             220

Arg Gly Val Phe Ala Phe Leu Leu Tyr Val Ala Thr Phe Met Tyr Val
225             230             235             240

Phe Ser Thr Phe Ala Asn Ile Leu Arg Asn Lys Glu Ser Met Lys Lys
            245             250             255

Thr Ala Ile Ala Ile Ala Val Ala Leu Ala Gly Phe Ala Thr Val Ala
        260             265             270

Gln Ala Arg Ser Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys
        275             280             285
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<210> 13
<211> 272
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic, comprising lac promoter, phage gene VIII leader sequen
      ce, influenza virus hemagglutinin tag, phage gene III seque
nce

<400> 13
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    60

tgaaaaagtc tttagtcctc aaagcctccg tagccgttgc taccctcgtt ccgatgctaa
    120

gcttcgcttc tagagcggcc gcttatccat acgacgtacc agactacgca ggaggtcatc
    180

accatcatca ccattagaga tctggaggcg gtactgttga aagttgttta gcaaaagcta
    240

Page 14

acatactgcg taataaggag tcttaagtcg ac
    272

<210> 14
<211> 69
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic, comprising influenza virus hemagglutinin tag, Histidin
      e tag, phage gene III sequence

<220>
<221> MISC_FEATURE
<222> (46)..(69)
<223> Xaa = stop codon

<400> 14

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                20   25   30

Val Pro Asp Tyr Ala Gly Gly His His His His His Xaa Arg Ser
            35   40   45

Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Ala Asn Ile Leu Arg
    50   55   60

Asn Lys Glu Ser Xaa
65

<210> 15
<211> 146
<212> DNA
<213> Homo Sapien

<400> 15

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       60

gaaaagatca ttgctgagaa agaggagcgt gtctctgaac tgcgccatca actccagtct
       120

gtaggaggtt gttaataggg cgcgcc
       146

<210> 16
<211> 44
<212> PRT
<213> Homo Sapien

<400> 16

Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser Arg Leu Leu Glu Lys Glu
1   5   10   15

Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu Lys Glu Glu Arg Val Ser
            20   25   30

Glu Leu Arg His Gln Leu Gln Ser Val Gly Gly Cys
            35   40

<210> 17
<211> 140
<212> DNA
<213> Homo Sapien

<400> 17

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       60

cgaatgaaga tcacagagct ggataaagac ttggaagagg tcaccatgca gctgcaggac
       120

gtcggaggtt gcgcggccgc
       140

<210> 18
<211> 47

<212> PRT
<213> Homo Sapien

<400> 18

Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu
1   5   10   15

Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu
            20   25   30

Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala Ala
            35   40   45

<210> 19
<211> 32
<212> DNA
<213> Bacteriophage M13

<400> 19
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    32

<210> 20
<211> 32
<212> DNA
<213> Bacteriophage M13

<400> 20
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    32

<210> 21
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

<400> 21
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    55

<210> 22
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Primer

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    55

<210> 23
<211> 3057
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic, comprising Ampicillin gene sequence, ColE1 repli
cation
       origin, f1 replication origin, lac promoter, GABAB recepto
r 1 do
       main, influenza virus hemagglutinin tag

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    120

gaggaattaa aaaatgaaaa agtctttagt cctcaaagcc tccgtagccg ttgctaccct
    180

cgttccgatg ctaagcttcg ctggtgagga aaagtcccgt ctgctggaga aagagaaccg
    240

tgaactggaa aagatcattg ctgagaaaga ggagcgtgtt tctgaactgc gccatcaact
    300

gcagtctgta ggcggttgca cgcgttctag agcggccgct tacccgtacg acgttccgga
    360

ctacgcatga taagtcgacc tcgaccaatt cgccctatag tgagtcgtat tacaattcac
    420

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